THAT WHICH IS CLAIMED:

1. A method of treating a traumatic central nervous system injury, said method comprising administering to a patient in need thereof a therapeutically effective amount of a composition comprising allopregnanolone.

2. The method of claim 1, wherein said injury is a traumatic brain injury.

3. The method of claim 2, wherein said traumatic brain injury results from a blunt force contusion.

4. The method of claim 1, wherein said method reduces edema in the patient following said traumatic CNS injury.

5. The method of claim 1, wherein said method reduces the inflammatory response in the patient following said traumatic CNS injury.

6. The method of claim 1, wherein said method reduces neuronal cell death in the patient following said traumatic CNS injury.

7. The method of claim 1, wherein said allopregnanolone is administered in at least one dosage of about 1μg/kg to about 50 mg/kg of body weight.

8. The method of claim 7, wherein said allopregnanolone is administered in at least one dosage of about 4 mg/kg of body weight.

9. The method of claim 7, wherein at least one dosage of said allopregnanolone is administered about 0.5 to about 100 hours following the traumatic CNS injury.

10. The method of claim 7, wherein the first dose of the allopregnanolone is administered about 1 hour following the traumatic CNS injury, and a subsequent allopregnanolone dose is administered about 6 hours following the injury.

11. The method of claim 7, wherein the first dose of the allopregnanolone is administered about 1 hour following the traumatic brain injury, a second allopregnanolone dosage is administered about 6 hours following the injury, and subsequent allopregnanolone dosages are administered in 24 hour intervals.

12. The method of claim 1, wherein said allopregnanolone is administered by intraperitoneal, subcutaneous, intravenous or intracerebroventricular administration or any combination thereof.

13. The method of claim 1, wherein said allopregnanolone is administered in a pharmaceutically acceptable carrier.

14. The method of claim 13, wherein said carrier is cyclodextrin.

15. The method of claim 1, wherein said composition further comprises at least one other neurotrophic agent.

16. A method of decreasing neurodegeneration on a population of cells in a subject following a traumatic injury to the central nervous system, said method comprising administering to a patient in need thereof a therapeutically effective dose of allopregnanolone, wherein said dose produces a neuroprotective effect in the patient.

17. The method of claim 16, wherein said traumatic CNS injury is a traumatic brain injury.

18. The method of claim 17, wherein the neurodegeneration is associated with cerebral edema.

19. The method of claim 17, wherein the neurodegeneration is associated with a blunt force contusion.

20. The method of claim 17, wherein the neurodegeneration is associated with an inflammatory response.